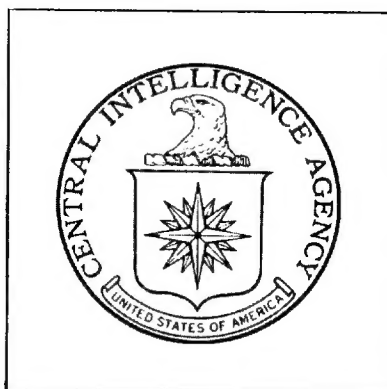


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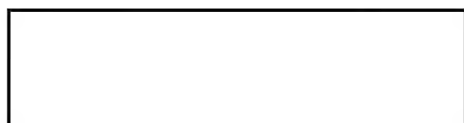
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INTELLIGENCE

Imagery Analysis Report

Lan-chou Chemical Industries
China

Declass Review by NIMA/DOD

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IMAGERY ANALYSIS SERVICE

August 1967

LAN-CHOU CHEMICAL INDUSTRIES

CHINA

SUMMARY

This study of the chemical industries in Lan-chou, China, reveals continued expansion in the nitrogen fertilizer plant, the petroleum refinery, and the petrochemical complex as of [] the date of the latest good quality photography covering all three installations. Additional processes were identified in the nitrogen fertilizer plant for nitrogenous fertilizer and possibly superphosphate, and new units were noted in the refinery. A few of the production areas in the petrochemical complex were identified as being associated with synthetic rubber; however, a large part of the complex remains unidentified.

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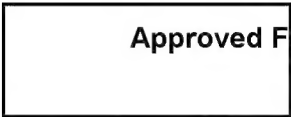
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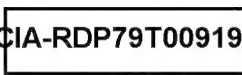
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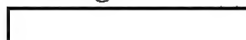
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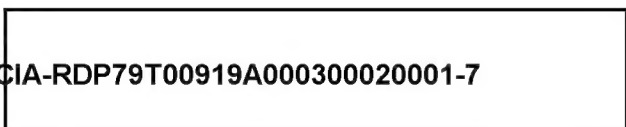
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FIGURE 1. CHEMICAL INDUSTRIES, LAN-CHOU, CHINA,

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INTRODUCTION

The chemical industries at Lan-chou consist of a nitrogen fertilizer plant, a petrochemical complex, and a petroleum refinery. They are located within a large industrial complex 9 nautical miles west of Lan-chou at the approximate geographic coordinates 36-06N 103-37E (Figure 1). This area, along the south bank of the Huang Ho (Yellow River), also contains a large thermal power plant, an aluminum plant, and several other small industries.

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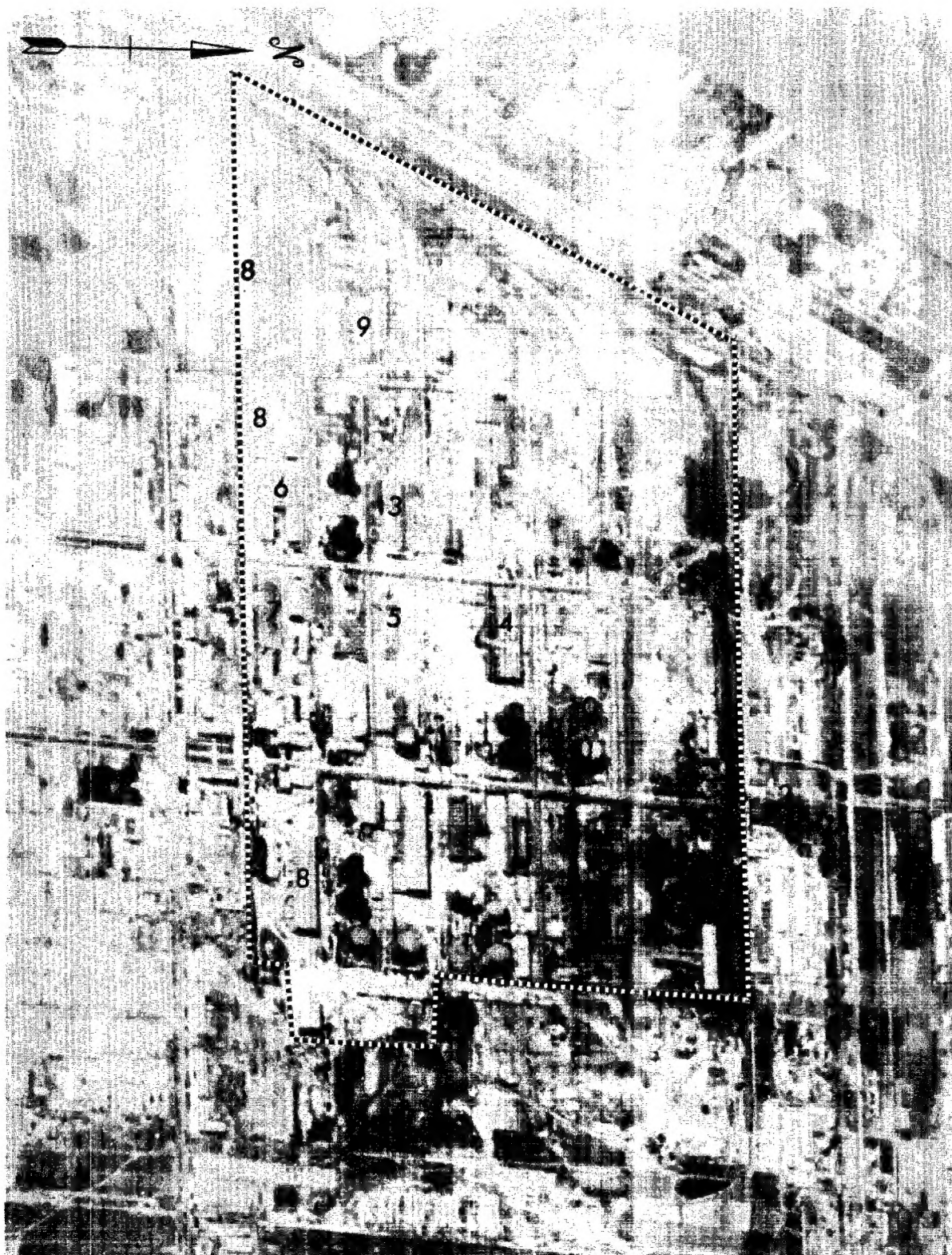


FIGURE 2. NITROGEN FERTILIZER PLANT, LAN-CHOU, CHINA,

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LAN-CHOU NITROGEN FERTILIZER PLANT

A previous report 1/ gave a detailed readout of the plant with regard to production of hydrogen, ammonia, nitric acid, and ammonium nitrate. This study will enlarge upon newly identified facilities within the plant since [REDACTED]. The following descriptions are keyed to annotations on Figure 2:

1. Air Liquefaction Building (nitrogen production)
2. Air Intake
3. Possible Oxidizer Building for Ammonia (nitric acid production)
4. Reactor Building and Nitric Acid Absorbers
5. Possible Quality Control Laboratory
6. Possible Crushing Building for Phosphate Ore
7. Possible Mixing and Dens Building for Superphosphate Fertilizer Production
8. Warehouses
9. Probable Liquid Ammonia Tanks - semiburied
10. Oxygen Gasholder
11. Nitrogen Gasholder

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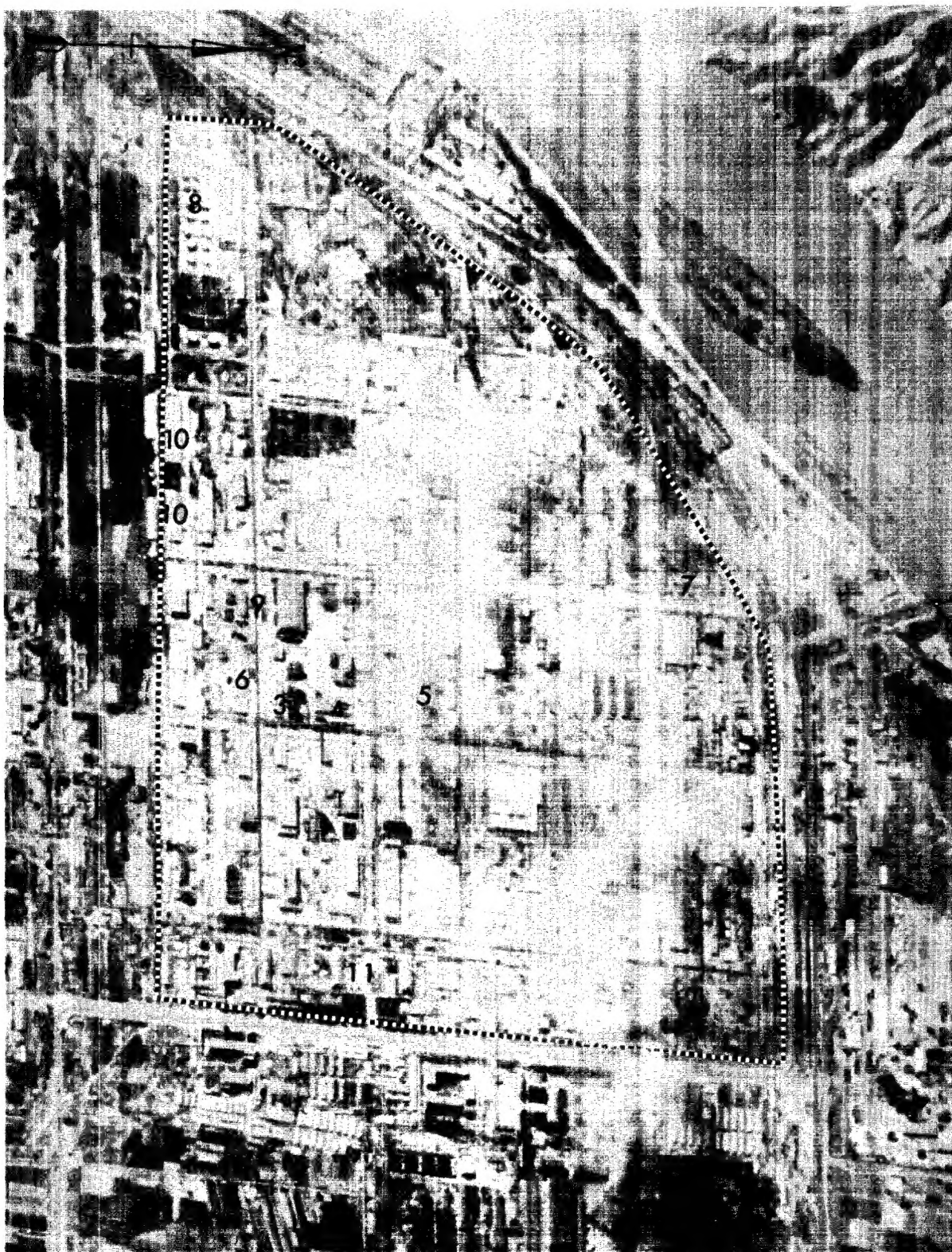


FIGURE 3. PETROCHEMICAL COMPLEX, LAN-CHOU, CHINA

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LAN-CHOU PETROCHEMICAL COMPLEX

Some of the buildings identified in this study are characteristic of synthetic rubber and styrene production plants. A number of other buildings, several of which contain fractionating towers, were observed; however, the functions of these buildings and the associated equipment could not be determined.

The following annotations are keyed to Figure 3:

1. Boilerhouse
2. Gasholder for Raw Gas
3. Aldol Unit (acetaldehyde conversion to aldol)
4. Injector Building (hydrogenation)
5. Styrene Plant
6. Acetaldehyde Building
7. Alcohol Plant
8. Styrene and Ethylbenzene Storage
9. Plastics Fabricating Plant
10. Warehouses
11. Administration Area

This plant appears to be under construction and is not in operation.

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FIGURE 4. PETROLEUM REFINERY, LAN-CHOU, CHINA

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LAN-CHOU PETROLEUM REFINERY

A previous memorandum 2/ provided a detailed readout of the refinery components; therefore, this study will update developments in the plant which have taken place [REDACTED] The following information is keyed to Figure 4:

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<u>Item</u>	<u>Area</u>	<u>New Facilities and Changes</u>
1	Packaging and Shipping Area	1 building enlarged/completed
2	Unidentified Area	New construction
3	Tank Storage Area	7 cylindrical tanks
4	Lubricating Oil Refinery Area	3 large cylindrical tanks
5	Unidentified Area	New construction and 3 horizontal tanks
6	Tank Storage Area	4 cylindrical tanks and 2 cylindrical tanks under construction
7	Tank Storage Area	5 cylindrical tanks removed and 2 cylindrical tanks replaced
8	Possible Petrochemical Area	At least 16 buildings added
9	Motor Pool	At least 4 buildings added
10.	Possible Petrochemical Area	3 buildings added

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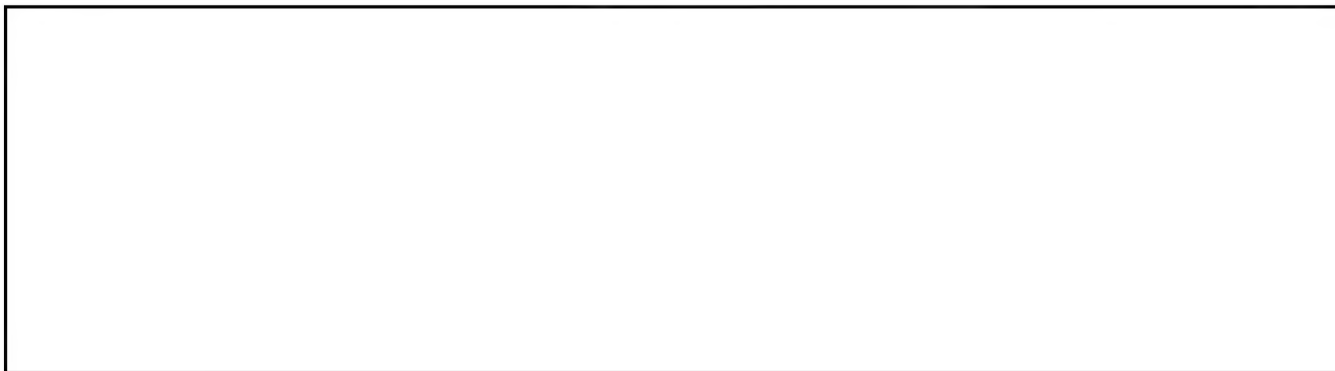
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2. Memorandum PID/IB-104/63, 7 June 1963, Petroleum Refinery, Lan-chou, China (SECRET [redacted])

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